

REMARKS

Reconsideration of this application, as amended, is respectfully requested.

In this response, claims 9, 12, 13, and 15 have been amended. Support for the amendments is found in the specification, the drawings, and in the claims as originally filed. Applicants submit that the amendments do not add new matter.

Applicants reserve all rights with respect to the applicability of the Doctrine of Equivalents.

The Examiner objected to Figure 3 of the drawings.

Applicants have amended Figure 3 to have the reference numeral “42” associated with the “diode laser linear arrangement,” which conforms with the specification (p. 3, line 20). The replacement sheet containing Figure 3 is submitted herewith.

Therefore, applicants respectfully submit that the Examiner’s objection to Figure 3 has been overcome.

The Examiner has objected to the title.

Without agreeing with the Examiner’s objection, applicants have amended the title in light of the Examiner’s objection.

Therefore, applicants respectfully submit that the Examiner’s objection to the title has been overcome.

The Examiner has objected to claims 12 and 15.

Applicants have amended claims 12 and 15 in light of the Examiner’s objection.

Therefore, applicants respectfully submit that the Examiner’s objections to the claims 12 and 15 have been overcome.

Claims 9 and 12-15 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,762,072 to Lutz (“Lutz”) in view of U.S. Patent No. 5,250,469 to Tanaka et al. (“Tanaka”) and U.S. Patent No. 5,617,441 to Nakata (“Nakata”).

Amended claim 9 reads as follows:

A device for alternately contacting two wafer-like component composite arrangements comprising:

a receiving frame for supporting and holding a first component composite arrangement on a transparent panel arranged in the receiving frame;

a diode laser composite arrangement arranged inside the receiving frame and separated from the first component composite arrangement by the transparent panel;

a holding clamp for receiving a second component composite arrangement such that contact surfaces of the first and the second component composite arrangements provided with contact metallizations are arranged opposite one another;

a positioning device for relative positioning of the component composite arrangements such that the contact metallizations to be joined together form contact pairs; and

a pressure device for generating a contact pressure between the contact metallizations of the contact pairs;

wherein the diode laser composite arrangement is designed as a diode laser linear arrangement having a plurality of diode lasers arranged in a row, wherein the plurality of diode lasers arranged on a diode laser mount are configured to move across the alignment of the row and in parallel to a plane of extent of the component composite arrangement; and

wherein the diode lasers of the diode laser linear arrangement are configured to be activated individually or in groups, wherein which of the diode lasers of the diode laser linear arrangement are needed to be activated for coverage of the respective transverse extent of a circular contact surface of the component composite arrangement is selected based on a distance to be traversed by the plurality of diode lasers in relation to the first component composite arrangement for acting upon the circular contact surface of the first component composite arrangement, wherein the diode laser linear arrangement is configured to move in parallel to the plane of extent of the component composite arrangement.

(Amended claim 9)(emphasis added)

Support for amended claim 9 can be found in the original disclosure (e.g., Figure 2 and 3 and corresponding portions of the detailed description).

More specifically, Figures 2 and 3 of the original disclosure show diode arrangement 42 in different positions beneath a circular contact surface of a wafer 12. As shown in Fig. 2, for

example, the linear laser diode arrangement 42 has a total of seven laser diodes 43 with merely three laser diodes 43 in an active status, which is sufficient in order to cover the respective transverse extent of the circular contact surface in a first position of the linear laser diode arrangement 42. Fig. 3 shows the linear diode laser arrangement 42 being passed crosswise to the lengthwise extension of the laser diode arrangement 42 into a middle position of a transverse path 46. In that position all of the total of seven laser diodes 43 of the linear laser diode arrangement 42 must be in an active status in order to cover the respective transverse extent of the circular contact surface of the wafer 12.

For amended claim 9, the laser diodes are "to be activated for coverage." In contrast to the language of amended claim 9, it is respectfully submitted that the Examiner is associating the phrase "to be activated for coverage" with the phrase "contact surfaces of the first and the second component composite arrangements," as follows from the Examiner's reasoning in the paragraph bridging pages 4 and 5 of the Office Action.

Applicants have amended claim 9 to replace "a number of" with "which of" to further indicate that the phrase "to be activated for coverage" relates to "the diode lasers."

Further, the Examiner acknowledged that "Lutz/Tanaka do not teach the diode the diode laser composite arrangements is designed as a diode laser linear arrangement having a plurality of diode lasers arranged in a row which diode lasers are arranged on a diode laser mount; and wherein the diode lasers of the diode laser linear arrangement can be activated individually or in groups."(Office Action, p. 6).

Accordingly, a combination of Lutz and Tanaka fails to disclose a diode laser composite arrangement designed as a diode laser linear arrangement having a plurality of diode lasers arranged in a row, wherein the plurality of diode lasers arranged on a diode laser mount are

configured to move across the alignment of the row and in parallel to a plane of extent of the component composite arrangement, as recited in amended claim 9.

Furthermore, in view of the above, a combination of Lutz and Tanaka fails to disclose wherein the diode lasers of the diode laser linear arrangement are configured to be activated individually or in groups, wherein which of the diode lasers of the diode laser linear arrangement are needed to be activated for coverage of the respective transverse extent of a circular contact surface of the component composite arrangement is selected based on a distance to be traversed by the plurality of diode lasers in relation to the first component composite arrangement for acting upon the circular contact surface of the first component composite arrangement, wherein the diode laser linear arrangement is configured to move in parallel to the plane of extent of the component composite arrangement, as recited in amended claim 9.

Nakata, in contrast, discloses a light source unit manufacturing method, adjusting method, and adjusting apparatus. More specifically, Nakata discloses that the light source consists of a plurality of laser diodes (Figure 20). In particular, Nakata discloses the following:

A second object of the present invention is to provide a method of manufacturing a light source unit where a light emitting means or an optical system does not shift even though laser welding is performed after fine positioning is performed with respect to the light emitting means or the optical system.”

(Nakata, col. 2, lines 22-27)(emphasis added)

Thus, Nakata teaches providing a light source that does not shift. In contrast, amended claim 9 refers to a plurality of diode lasers arranged on a diode laser mount are configured to move across the alignment of the row and in parallel to a plane of extent of the component composite arrangement.

Further, Nakata discloses that “ ‘on/off’ of each of the laser diodes ...is independently repeated...”(col. 8, lines 32-34). In contrast, amended claim 9 refers to which of the diode lasers

of the diode laser linear arrangement are needed to be activated for coverage of the respective transverse extent of a circular contact surface of the component composite arrangement is selected based on a distance to be traversed by the plurality of diode lasers in relation to the first component composite arrangement for acting upon the circular contact surface of the first component composite arrangement. Nakata fails to disclose determining which of the diode lasers of the diode laser linear arrangement are needed to be activated for coverage of the respective transverse extent of a circular contact surface of the component composite arrangement based on a distance to be traversed by the plurality of diode lasers in relation to the first component composite arrangement for acting upon the circular contact surface of the first component composite arrangement, as recited in amended claim 9.

Moreover, Nakata fails to disclose a diode laser linear arrangement having a plurality of laser diodes that is configured to move in parallel to a plane of extent of the component composite arrangement, as recited in amended claim 9.

It is respectfully submitted that none of the references cited by the Examiner teach or suggest a combination with each other. It would be impermissible hindsight, based on applicants' own disclosure, to combine these references.

Furthermore, even if Lutz, Tanaka, and Nakata were combined, such a combination would still lack a plurality of diode lasers arranged on a diode laser mount that are configured to move across the alignment of the row and in parallel to a plane of extent of the component composite arrangement, wherein which of the diode lasers of the diode laser linear arrangement are needed to be activated for coverage of the respective transverse extent of a circular contact surface of the component composite arrangement is selected based on a distance to be traversed by the plurality of diode lasers in relation to the first component composite arrangement for

acting upon the circular contact surface of the first component composite arrangement, and
wherein the diode laser linear arrangement is configured to move in parallel to the plane of
extent of the component composite arrangement, as recited in amended claim 9.

Therefore, applicants respectfully submit that claim 9, as amended, is not obvious under 35 U.S.C § 103(a) over Lutz in view of Tanaka and Nakata.

Given that claims 12-15 depend from amended claim 9, and add additional limitations, applicants respectfully submit claims 12-15 are not obvious under 35 U.S.C §103(a) over Lutz in view of Tanaka and Nakata.

Claim 16 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Lutz in view of Tanaka/Nakata and further in view of U.S. Patent No. 4,612,083 to Yasumoto et al. (“Yasumoto”).

As set forth above, even if Lutz, Tanaka, and Nakata were combined, such a combination would still lack a plurality of diode lasers arranged on a diode laser mount that are configured to move across the alignment of the row and in parallel to a plane of extent of the component composite arrangement, wherein which of the diode lasers of the diode laser linear arrangement are needed to be activated for coverage of the respective transverse extent of a circular contact surface of the component composite arrangement is selected based on a distance to be traversed by the plurality of diode lasers in relation to the first component composite arrangement for acting upon the circular contact surface of the first component composite arrangement, and wherein the diode laser linear arrangement is configured to move in parallel to the plane of extent of the component composite arrangement, as recited in amended claim 9.

Yasumoto, in contrast, discloses fabricating of a three-dimensional semiconductor device. Yasumoto fails to disclose a plurality of diode lasers arranged on a diode laser mount that are

configured to move across the alignment of the row and in parallel to a plane of extent of the component composite arrangement, wherein which of the diode lasers of the diode laser linear arrangement are needed to be activated for coverage of the respective transverse extent of a circular contact surface of the component composite arrangement is selected based on a distance to be traversed by the plurality of diode lasers in relation to the first component composite arrangement for acting upon the circular contact surface of the first component composite arrangement, and wherein the diode laser linear arrangement is configured to move in parallel to the plane of extent of the component composite arrangement, as recited in amended claim 9.

It is respectfully submitted that none of the references cited by the Examiner teach or suggest a combination with each other. It would be impermissible hindsight, based on applicants' own disclosure, to combine these references.

Furthermore, even if Yasumoto, Lutz, Tanaka, and Nakata were combined, such a combination would still lack a plurality of diode lasers arranged on a diode laser mount that are configured to move across the alignment of the row and in parallel to a plane of extent of the component composite arrangement, wherein which of the diode lasers of the diode laser linear arrangement are needed to be activated for coverage of the respective transverse extent of a circular contact surface of the component composite arrangement is selected based on a distance to be traversed by the plurality of diode lasers in relation to the first component composite arrangement for acting upon the circular contact surface of the first component composite arrangement, and wherein the diode laser linear arrangement is configured to move in parallel to the plane of extent of the component composite arrangement, as recited in amended claim 9.

Given that claim 16 depends from amended claim 9, and adds additional limitations, applicants respectfully submit claim 16 is not obvious under 35 U.S.C §103(a) over Lutz as modified by Tanaka/Nakata, and further in view of Yasumoto.

It is respectfully submitted that in view of the amendments and arguments set forth herein, the applicable rejections and objections have been overcome. Please charge any shortages and credit any overcharges to our Deposit Account No. 02-2666.

Respectfully submitted,
BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP

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Tatiana Rossin/
Tatiana Rossin
Reg. No. 56,833

1279 Oakmead Parkway
Sunnyvale, CA 94085-4040
(408) 720-8300
Fax (408) 720-8383

Customer No. 08791